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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/828,765      | 04/09/2001  | Chaur-Wen Jih        | JCLA6451            | 9773             |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2654

DATE MAILED: 10/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/828,765 | <b>Applicant(s)</b><br>JIH, CHAUR-WEN |  |
|                              | <b>Examiner</b><br>Daniel A. Nolan   | <b>Art Unit</b><br>2654               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature (of claim 3) *a multiplexer for receiving the signal data stored by the second memory and outputting a speech signal based on a selective signal received by a selective input ends* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The disclosure is objected to because of the following informalities:
  - The sentence on page 2 lines 15-16 is incomplete. The Examiner is proceeding with the understanding that the sentence should be read, “(1) *Once a tag is inserted into the sound wave, meaning that the sound wave is replaced by the input/output commands, then [and] the voice output is temporarily interrupted*”.
  - The sentence of lines 21-23 on page 2 is subject to interpretation, as the phrase of “*a voice produced by a flute*” could be either personification or an anomalous error.

The Examiner is proceeding with the understanding that the intent is to describe analogously “a *high-pitched, smooth, flute-like voice*”.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 1 and 3 are objected to because of the following informalities:

- Claim 1 is not a complete sentence. The Examiner is proceeding with the understanding that the claim should be read as follows, in part:

“...wherein the speech synthesizer [reading] reads the speech data of the 1<sup>st</sup> memory [while,] with the latch device simultaneously reading the signal data of the 2<sup>nd</sup> memory [, and] while the speech synthesizer and the latch device both output [ting] the voice and status signals in synchrony”.

- In claim 3, the word “, and” should be removed from the end of line 20.
- Claim 3 is not a complete sentence. The Examiner is proceeding with the understanding that the claim should be read as follows, in part:

“...wherein the speech synthesizer [reading] reads the speech data of the 1<sup>st</sup> memory [while,] with the multiplexer simultaneously reading the signal data of the 2<sup>nd</sup> memory through the latch device [, and] while the speech synthesizer and the latch device both output [ting] the voice and status signals in synchrony”.

- Claim 3 is further subject to interpretation in that the *speech signal output* (line 19) is not necessarily audio but may remain in the form of an analog signal that could be subsequently stored (line 20).

The Examiner is proceeding with the understanding provided by the specification, that control/status is distinct from speech and the drawing (figure 7) that line 20 is to be read: "a 2<sup>nd</sup> memory for storing separate, distinct and essentially unrelated signal data" and that the word "speech" be erased from line 22.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### **Raymond et al**

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Raymond et al (U.S. Patent 4,675,840).

7. Regarding claim 1 as understood by the Examiner, the *speech processor system with auxiliary memory access of Raymond et al* reads on every feature of the *synchronized output speech synthesizer* as follows:

- Raymond et al (by demarcating what may be incidentally an array of, or a single physical, memory into *two distinct logical* memories that are to be separately managed as individual storage areas, as with the *speech memory region*, abstract line 3) reads on the feature of a *1<sup>st</sup> memory for storing speech data*;
- Raymond et al (column 9 lines 16-18) reads on the feature of a *speech synchronizer for receiving the speech data stored by the first memory* (column 9 line 65), *thereby creating a speech signal output*;
- Raymond et al (with the *separate command memory region*, abstract line 6) reads on the feature of a *2<sup>nd</sup> memory for storing signal data*; and
- Raymond et al (column 10 line 1) reads on the feature of a *latch device for receiving the signal data stored by the second memory and thereby outputting a status signal*;
- Raymond et al (column 17 lines 60-68) reads on the feature of *the speech synthesizer reading speech data of the 1<sup>st</sup> memory while, the latch device simultaneously* (column 17 lines 66-67) *reading the signal data of the 2<sup>nd</sup> memory, and the speech synthesizer and the latch device outputting the voice and status signals in synchrony* (as from column 9 line 37 for column 18 lines 5-7).

8. Regarding claim 2, the claim is set forth with the same limits as claim 1.

Raymond et al (604 figure 6) reads on the feature of a *speaker for receiving the speech signal outputted by the speech synchronizer and playing the voice*.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Raymond et al & Zheng et al**

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raymond et al in view of Zheng et al (U.S. Patent 6,314,393).

11. Regarding claim 3 as understood by the Examiner, the features of a *1<sup>st</sup> memory for storing speech data; a speech synthesizer for receiving the speech data stored by the 1<sup>st</sup> memory, thereby creating a speech signal output; a 2<sup>nd</sup> memory for storing signal data and outputting a status signal, and the feature of simultaneously reading the signal data of the 2<sup>nd</sup> memory through the latch device, and speech synthesizer and the latch device outputting the voice and status signals in synchrony* are the same as those corresponding features found in claim 1 and the reasons for rejection that were set forth in response to that claim are applied to this.

Concerning the remaining features, where Raymond et al is silent on the specific subject of multiplexing, the parallel pipeline VLSI architecture for a low-delay CELP coder/decoder of Zheng et al reads on the feature of *separate memories for speech and*

*control/status* (column 2 lines 1-13) as well as the additional features of a synchronized output speech synthesizer device as follows:

- Zheng et al (column 8 lines 43-52) reads on the feature of *a multiplexer for receiving the signal data stored by the second memory and outputting a speech signal based on a selective signal received by a selective input ends; and*
- Zheng et al (column 8 line 54) reads on the feature of *a latch device circuit for receiving the signal data output by the multiplexer* (claim 16 line 18).
- It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zheng et al to the device/method of Raymond et al so as to combine those functions which are dissimilar but require similar resources to avoid duplicate components, thereby maximizing the limited resources of integrated circuitry.

12. Regarding claim 4, the claim is set forth with the same limits as claim 3.

The features of the claim are the same as those found for claim 2 and the claim is rejected for the same reasons.

**Raymond et al, Zheng et al & Hohl et al**

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raymond et al in view of Zheng et al (U.S. Patent 6,314,393) and further in view of Hohl et al (U.S. Patent 4,630,301 A).



14. Regarding claim 5, the claim is set forth with the same limits as claim 4.

Neither Raymond et al nor Zheng et al specify that the conventional "power-on/reset" function is included in the control signals. The *voice activated echo generator* of Hohl et al incorporating power-on/reset circuitry reads on the feature that *the material received by the multiplexer includes the signal data (column 34 lines 18-20) an output register data and a power-on reset signal (column 2 lines 51-54)* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Hohl et al to the device/method of Raymond et al so as to insure that the circuit powers up properly.

### **Conclusion**

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Del Castillo et al (U.S. Patent 6,317,714 B1) *controller and associated mechanical characters operable for continuously performing received control data while engaging in bi-directional communications over a single communications channel.*
- Taguchi (U.S. Patent 4,991,215 A) multi-pulse coding apparatus with a reduced bit rate teaches employing auxiliary memory to provide control functions.
- Shibazaki et al (Japan Patent 09-081632) combines status and information output.
- Fukui et al (Japan Patent 08-255150) speech with status and control signals.
- Hyman et al (U.S. Patent 5,495,557 A) electronic toy for forming sentences incorporating sensitive power-on/reset circuitry.

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

or mailed to: Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or hand-delivered to: Crystal Park 2,  
2121 Crystal Drive, Arlington, VA,  
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan  
Examiner  
Art Unit 2654

DAN/d  
September 26, 2003

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER